

**ABSTRACT**

A bridge rectifier for an alternating current generator having a slip-ring-end, comprising: a first heat sink having a first polarity set of diodes; an insulating layer located on said first heat sink; a second heat sink having a second polarity set of diodes and disposed on said insulating layer; a connection cover mounted on said second heat sink; a capacitor connected to said connection cover and to said second heat sink; and a B+ stud mounted on said second heat sink and going through the alternator slip-ring-end, said first heat sink and the insulating layer. The second heat sink can also comprise: a base section including first and second areas; dome shaped holes into the second heat sink and receiving said first polarity set of diodes therein; diode receiving holes in said base section and receiving said second polarity set of diodes therein; and a plateau section disposed on the first area of said base section.